

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 22 SEP 2005

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Applicant's or agent's file reference P00137WO	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/GB2004/002681	International filing date (day/month/year) 23.06.2004	Priority date (day/month/year) 24.06.2003
International Patent Classification (IPC) or national classification and IPC C04B28/14		
Applicant BPB PLC et al.		
<p>1. This report is the International preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 22.04.2005	Date of completion of this report 21.09.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Gattinger, I. Telephone No. +49 89 2399-6097	



**INTERNATIONAL PRELIMINARY REPORT
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International application No.
PCT/GB2004/002681

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-10 as originally filed

Claims, Numbers

1-20 filed with telefax on 22.04.2005

Drawings, Sheets

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☒ the claims, Nos. 21,22
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify)*:
- ☐ any table(s) related to sequence listing *(specify)*:

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☒ the claims, Nos. 2
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify)*:
- ☐ any table(s) related to sequence listing *(specify)*:

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-20
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-20
Industrial applicability (IA)	Yes: Claims	1-20
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

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Re Item I

Basis of the report

The amended claims 1 as well as 3 to 20 filed with fax from 22.04.2005 fulfil the requirements of Article 34(2)(b) PCT are therefore considered for the present report. However, amended claim 2 does not fulfil the requirements of Article 34(2)(b) PCT as the value "2.99" has no basis in the originally filed application. Dependent claim 2 is therefore discussed in its originally filed wording (see also point VIII below).

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: US-A-4 221 599 (DELEUIL MICHEL) 9 September 1980
D2: DD 269 295 A (VEB KOMBINAT KALI) 28 June 1989
D3: EP-A-0 269 736 (BRUSS POLT I) 8 June 1988

2. After consideration of the comments set out by the applicant in his letter from 22.04.2005 the present application still does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 to 20 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D2 is regarded as being the closest prior art to the subject-matter of independent claims 1 and 19, and discloses (the references in parentheses applying to this document):

A method for preparing gypsum boards (page 2; lines 23 to 26) comprising mixing a calcium sulfate hemihydrate binder with natural gypsum stone as an inert aggregate (page 2; lines 30 to 35). D2 explicitly discloses the gypsum aggregate to be granular of a specified particle size (page 3; lines 8 to 10), which falls into the scope of independent claim 1.

The subject-matter of claim 1 therefore differs from D2 in that no specific surface area is specified for the inert gypsum filler.

However it appears, that the skilled man seeking to improve sound proofing properties of the resulting gypsum boards would take account of D1, which already mentions this problem (D1: column 1: lines 62 to 64) and discloses shaped gypsum panels derived from stucco compositions comprising "wet" (uncalcined) gypsum as an inert aggregate with specific surface areas of 0.1 to 0.4 m²/g (column 4; lines 12 to 30) and would apply these features with corresponding effect to a gypsum board according to document D2, thereby arriving at method for preparing gypsum boards according to claim 1. Consequently also independent claim 19 can not be considered to be inventive.

As the feature of use of a synthetic gypsum such as phosphogypsum is also known from D1 independent claims 12 and 20 can also not be regarded to be inventive.

3. Dependent claims 2 to 11 and 14 to 18 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:
- The features of dependent claims 2, 3, 6 to 10 and 14 to 17 are described in D1 as providing the same advantages as in the present application. The skilled person would therefore regard it as a normal option to include these features in the preparation of gypsum boards described in document D2 in order to solve the problem posed.
 - The features of dependent claims 11 and 18 are already known from document D3, which discloses the preparation gypsum boards (page 1; lines 7 to 10) from mixtures of a calcium sulfate hemihydrate binder with gypsum stone (example 8) or waste gypsum such as phosphogypsum (example 6), which may be replaced also by shredded waste gypsum boards (page 4; lines 2 to 4). It would therefore be obvious to the person skilled in the art, to apply these features with corresponding effect to a mixture comprising hemihydrate and uncalcined gypsum of a specified surface area, thereby arriving at gypsum boards according to claims 11 and 18.

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- The features of dependent claims 4 and 5 are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

Re Item VIII

Certain observations on the international application

The application does not meet the requirements of Article 6 PCT, because claims 2 and 13 are not clear.

- Claim 2 is not clear as the range of the specific surface area includes the value of 0,3 m²/g, which is contradictory to the scope of independent claim 1. Without infringing Article 34(2)(b) PCT the range could be suitably be expressed as "0.1 to < 0.3 m²/g".
- The features of dependent claim 13 are (with amendments from 22.04.2005) fully incorporated into the subject-matter of independent claim 12, rendering said claim 13 therefore redundant.